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DOCKET FILE COPY ORIGINAL

February 24, 1997

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
Mail Stop 1170
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Dear Mr. Caton:

Re: CC Docket No. 96-45, Federal-State Joint Board on Universal Service, CCBPol 97-2, Commission Staff Analysis of Forward-Looking Economic Cost Proxy Models

On behalf of Pacific Bell, please find enclosed an original and 6 copies of its "Reply Comments On Commission Staff Analysis On The Use Of Computer Models For Estimating Forward-Looking Economic Costs" in the above proceeding.

Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions or require additional information concerning this matter.

Sincerely,

Alan Ciamporcero

Enclosures

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	
Federal-State Joint Board on Universal Service	CC Docket No. 96-45
Commission Staff Analysis of Forward-Looking Economic Cost Proxy Models	CCBPol 97-2

REPLY COMMENTS OF PACIFIC BELL ON COMMISSION STAFF ANALYSIS ON THE USE OF COMPUTER MODELS FOR ESTIMATING FORWARD-LOOKING ECONOMIC COSTS

I. INTRODUCTION

We devote the entirety of these comments to an analysis of some of the problems that remain in version 3 of the Hatfield proxy model. We were unable to present these remarks in our opening comments because we could not run the model for California: every time we tried to do so, we received an error message from the computer. Despite using different computers with far more memory than the model requires, loading new software, and consulting regularly with AT&T, we are still unable to produce results for California.

This difficulty of use is a theme of Hatfield 3. As we show below, Hatfield is still very much a black box, contains proprietary data, and produces reports that are not useful. It overstates the extent of aerial plant sharing, overstates the number of customers we serve, has higher (and thus even more erroneous) depreciation lives than Hatfield 2.2.2, and has a "forward-looking" adjustment factor

that causes a more serious understatement of costs than did Hatfield 2.2.2. Finally, it makes assumptions about an imaginary, "efficient" network that depart from reality -- and are even dangerous.

We proceed to our specific criticisms of Hatfield 3.

II. COMMENTS REGARDING HATFIELD VERSION 3

We can make several observations based on what we know of Hatfield or have seen in the results for other states:

- *Hatfield 3 still relies on proprietary data.* Hatfield 3 is still based on unattainable proprietary information, contrary to its sponsors' claims.[1] For example, Hatfield's switch investment data is based on information from Northern Business Information ("NBI"). When we tried to obtain information about those data from NBI, we were told that the data are based on "a composite, weighted average of prices charged to RBOCs, GTE and independent carriers."[2] The Commission can go a long way to solving switch data problems by issuing data requests to switch vendors.

- *Hatfield 3 is still a "black box."* Hatfield 3 is harder to use and is *more of a "black box"* than the earlier version. It is more difficult to trace inputs; one must look at more tables; and the model uses more hard-coded macros. Some of the "user adjustable inputs" are based solely on the Hatfield modelers' discussions with AT&T and MCI, with little empirical support.

- *Hatfield miscalculates sharing.* Hatfield 3 makes serious errors in its assumption about how much outside plant is *shared.* It assumes that 25% of aerial structure is

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[1] *See Comments (of AT&T and MCI), Use of Computer Models for Estimating Forward-Looking Economic Costs -- A Staff Analysis* (filed Feb. 18, 1997) ("AT&T/MCI") at 8 ("all data, computations, and software associated with the model are available to all parties for review, with the ability to examine, and, as appropriate, modify over 400 inputs). The AT&T and MCI comments are not labeled clearly.

[2] See Attachment A.

assigned to telephony. It is unreasonable to assume that in all cases, poles accommodate 4 utilities (Power, Cable TV, ILEC and a CLEC). Even if 4 occupants desired space on all poles, not all poles can accommodate 4 occupants. In addition, Cable TV and CLECs do not share an equal amount of the pole cost with power companies and ILECs. They *lease* space for a fee. These assumptions understate the cost of outside plant by as much as 50%.

- *Hatfield overestimates our customer base.* Hatfield 3 assumes Pacific Bell serves approximately *11 million households*, when the true number is approximately *8.5 million.* The difference is attributable to Hatfield's estimate that we have a *40% second line penetration* in households in our service area, which *overstates* the actual penetration by *more than 100%.*

- Hatfield 3 *increases depreciation lives*, resulting in a significant decrease in cost output. This is one example where Hatfield's sponsors appear to have manipulated the data inputs so as not to increase the model's total cost outputs.

- Hatfield 3 uses a *50% forward-looking adjustment factor*, which causes an decrease in the cost outputs from the already understated Hatfield 2.2.2 outputs based on a 70% factor. Again, this is an area in which Hatfield 3 appears to make an adjustment to offset cost increases caused by changes to other aspects of the model.

- Hatfield 3 makes several obvious omissions that prove its *imagined "network" is far from a real network* presenting real safety and operational concerns:

  ◊ Hatfield 3 assumes *loops that are so long they will not "talk."* The loop lengths Hatfield 3 assumes can be served from a digital loop carrier are too long. Because the network will not work at the limits that have been set by Hatfield 3 without additional electronics not assumed in the model, Hatfield

3 also omits necessary, expensive equipment that would increase the loop cost substantially. Hatfield 3's attempt to account for long loops also falls short in accounting for provisioning cost. The additional cost for loading is also understated.

◊ Hatfield assumes that there are indoor serving area interfaces in the network, but does not assume such plant items as *protector blocks*, which are *essential to prevent fires*. This omission understates costs of the interfaces by more than 20%;

◊ Hatfield 3 assumes away *manholes* in the distribution plant;

◊ Hatfield does not include costs for *messengers, guy wires and guy anchors* in aerial plant even though a quick visit to any telephone outside plant location would reveal these items actually exist. Poles fall down without guy wires and anchors;

◊ Hatfield assumes only 10% of plant is *underground* in urban areas, when the real number is closer to 85%;

◊ Hatfield "mistakenly" assigns the cost of providing trench for *conduit* using the cost of *buried* trench, ranging in cost from *$1.77 to $45.00* per their defaults. Instead, they should be using the cost for conduit placement, ranging in cost from *$10.29 to $75.00* in accordance with their own default tables;

- ◊ Hatfield 3 does not account for cost of trunking between buildings where operators work and switches. Such trunking is necessary not only in the ordinary course of business, but also to reroute traffic during disasters;
- ◊ Hatfield does not account for bodies of water such as the San Francisco Bay. According to Hatfield 3, it would cost Pacific Bell no more to construct interoffice facilities either east-west or north-south across the San Francisco Bay than it would if the Bay did not exist and instead were a soft soiled field with no bedrock near the surface.

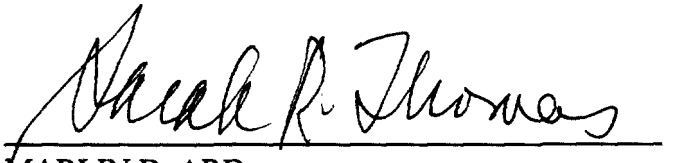
III. CONCLUSION

Despite all of the changes Hatfield 3's sponsors made, the model is still awash in problems. Most disconcerting is the fact the changes had no noticeable effect on the model's cost outputs. This fact suggests that the sponsors have manipulated the data to meet criticisms while

maintaining the costs the model produces at low levels. We object strenuously to any model that undercompensates us for the actual, current costs of our network. Hatfield 3 remains such a model.

Respectfully submitted,

PACIFIC BELL



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Date: February 24, 1997
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ATTACHMENT - A

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Additional Methodology and Assumptions for Exhibit 3-37, supplemental to NBI's "U.S. Central Office Equipment Market: 1995 Edition"

In addition to the assumptions and methodologies stated in the Appendix of the above mentioned report, are the following assumptions:

1. **Bundled versus Unbundled:**
   Bundled refers to prices for lines or trunks when purchased as part of new switching systems.
   Unbundled refers to prices for lines or trunks purchased as separate units and not as part of an original switching system purchase; i.e., for growth of a system.

2. The price per digital line is a composite, weighted average of prices charged to RBOCs, GTE, and independent carriers. The basic number is derived by dividing the price of the switch by the number of lines and multiplying by a weighting factor. The price per line does contain the common elements of the switch , as sized, including trunk circuits required for the switch to function.

3. Digital trunk prices are calculated as if a single trunk circuit were to be purchased for both bundled and unbundled trunks.

4. Each supplier has its own unique configuration for line circuits. An example might be three separate codes of circuit packs to make up eight lines. This contributes to the price of unbundled lines.

5. By virtue of their size and purchasing power, the RBOCs typically command greater discounts from suppliers.

6. Source: Northern Business Information Estimates.

K.J. Kelly, Senior Analyst; and Lance Lindstrom, Managing Director
Northern Business Information

CERTIFICATE OF SERVICE

I, Colin R. Petheram, hereby certify that copies of the foregoing "Reply comments of Pacific Telesis Group" were served by first class US mail, postage paid, upon the parties on the attached service list this 24th day of February, 1997.

Colin R. Petheram

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